

Safety Bulletin

18 July 2016

What happens when I declare an emergency?

Introduction

Airservices and other aviation agencies provide many services to support aircraft in an emergency situation. At Airservices and industry forums there are frequently questions raised such as:

- What happens when I declare an emergency? and
- What are the differences in support provided if I declare a PAN PAN or MAYDAY?

Pilots have also asked whether they should declare a PAN PAN or a MAYDAY for a particular scenario or aircraft related problem - for example, should I declare a PAN PAN or MAYDAY for a flap failure?. In general terms, these scenarios should be considered well before the flight, with company guidance or procedures known by pilots. Although it is impossible to cover every emergency scenario, this Safety Bulletin aims to provide some general information on what happens when pilots (or Air Traffic Control) declare an emergency and the type of support that may be provided.

Emergency notification

There are two levels of emergency notification:

- **MAYDAY:** My aircraft and its occupants are threatened by grave and imminent danger and/or I require immediate assistance.
- **PAN PAN:** I have an urgent message to transmit concerning the safety of my aircraft or other vehicle or of some person on board or within sight but I do not require immediate assistance.

These phrases alert ATC to the level of response required. If you just tell ATC that you are declaring an emergency, more information on the nature of emergency will be required to enable them to coordinate the appropriate response for you.

Emergency phases

All Air Traffic Services (ATS) units are responsible for the declaration of an appropriate emergency phase. This phase indicates to the controller the severity of the situation and can be upgraded or downgraded depending on its progress. The following three phases of emergency have been established:

- **Uncertainty Phase:** A situation where uncertainty exists as to the safety of an aircraft and its occupants.
- **Alert Phase:** A situation where apprehension exists as to the safety of an aircraft and its occupants (this generally equates to a PAN PAN)
- **Distress Phase:** A situation wherein there is reasonable certainty that an aircraft and its occupants are threatened by grave and imminent danger or require immediate assistance (this generally equates to a MAYDAY)

What happens when you declare an emergency?

In addition to declaring an emergency phase, the actions taken by ATC will depend on the type of emergency and other factors such as location, type of flight, environmental conditions etc. Similar to pilots, ATC have an In Flight Emergency Response (IFER) checklist that details ATC actions and considerations to be followed during emergencies. Examples of the types of emergencies included in the IFER checklist include:

- VFR emergencies, including VFR in IMC
- medical emergencies, including pilot and/or passenger
- general aircraft equipment failures and emergencies, such as fuel shortage
- unlawful interference

Once aware of your emergency, ATC may provide a range of support services including:

- allocating you priority status
- allocating you a discrete frequency (where available) to reduce distractions
- notifying the Joint Rescue Coordination Centre (JRCC), appropriate aerodrome or other agency
- asking other aircraft in your vicinity to provide assistance.

Aerodrome Response

Once the proposed landing airport is advised of your pending arrival, they will activate their Aerodrome Emergency Plan (AEP). An AEP has two activation levels:

- **Local Standby:** declared when only airport-based agencies are required in the AEP (e.g. the on-airport Rescue and Fire Fighting Service and the Aerodrome Safety Officer). A Local Standby will be the normal response when an aircraft approaching an airport is known or is suspected to have developed some defect, but the trouble would not normally involve any serious difficulty in effecting a safe landing (This generally equates to a PAN PAN).
- **Full Emergency:** declared when more than the airport-based agencies are required. A Full Emergency will be declared when an aircraft approaching the airport is known or suspected to be in such trouble that there is danger of an accident (This generally equates to a MAYDAY). The level of Full Emergency declared by ATC is determined by the aircraft's seating capacity.

All AEPs consider the aerodrome specific capabilities, limitations and procedures. For example, a number of controlled aerodromes do not have on-airport fire services. At these aerodromes, or at aerodromes where the on-airport fire services have been stood down, ATC will advise the pilot "THERE IS NO ON-AIRPORT FIRE SERVICE AT YOUR INTENDED AERODROME. WHAT SERVICES DO YOU REQUIRE?" In these situations it can take time for the appropriate emergency service(s) to arrive at the aerodrome, so early advice is paramount to an effective response.

Other scenarios

There are a range of other scenarios in which the pilot should declare an emergency. For example:

- Deviation from route or track in controlled airspace without a clearance; and
- Deviation from route or track into restricted airspace without a clearance.

In these scenarios the pilot should declare a PAN PAN on the appropriate frequency to inform other aircraft and/or ATC of the deviation, and complete actions to reduce the likelihood of a more serious incident. Pilots should note, however, that the declaration of an emergency does not guarantee the aircraft safe passage.

Conclusion

There are a wide range of emergency scenarios which may affect aircraft. ATC and aerodromes are ready to support pilots in these scenarios through their development and practice of plans and procedures. For pilots, it is extremely important they advise ATC as soon as they recognise an emergency situation developing to allow the appropriate support measures to be activated.

For further information

Airservices Safety Liaison: safety.liaison@airservicesaustralia.com